What is claimed is:

1. A method of manufacturing a semiconductor device comprising a process for forming a seed layer in a via hole or a wiring-trench formed in an interlayer insulating film formed on a semiconductor substrate, and then burying a wiring material using an electroplating method, wherein the current step of said plating method has only one step for flowing a current in the direction opposite to the direction for growing the plating.

2. The method of manufacturing a semiconductor device according to claim 1, wherein said current step comprises three steps: a first step for flowing a current only in the direction for growing the plating; a second step for flowing a current only in the direction opposite to the direction for growing the plating; and a third current step for flowing only in the direction identical to said first step; in the order of said first, second, and third steps.

3. The method of manufacturing a semiconductor device according to claim 1, wherein said step flowing a current only in the direction opposite to the direction for growing the plating is configured so that the absolute value of the product of the current and the time is within a range between 1.0 and 120 mA × sec/cm^2.

4. The method of manufacturing a semiconductor device according to claim 2, wherein said second current step is configured so that the absolute value of the product of the current and the time is within a range between 1.0 and 120 mA × sec/cm^2.

5. The method of manufacturing a semiconductor device according to claim 2, wherein said first current step is configured so that the product of the current and the time is within a range between 120 and 2700 mA × sec/cm^2.

6. The method of manufacturing a semiconductor device according to claim 4, wherein said first current step is configured so that the product of the current and the time is within a range between 120 and 2700 mA × sec/cm^2.

7. The method of manufacturing a semiconductor device according to claim 2, wherein the current value of said first current step is within a range between 0.5 and 13 mA/cm^2.

8. The method of manufacturing a semiconductor device according to claim 4, wherein the current value of said first current step is within a range between 0.5 and 13 mA/cm^2.

9. The method of manufacturing a semiconductor device according to claim 2, wherein the current value of said third current step is within a range between 16 and 90 mA/cm^2.

10. The method of manufacturing a semiconductor device according to claim 4, wherein the current value of said third current step is within a range between 16 and 90 mA/cm^2.

11. The method of manufacturing a semiconductor device according to claim 6, wherein the current value of said third current step is within a range between 16 and 90 mA/cm^2.

12. The method of manufacturing a semiconductor device according to claim 1, wherein said wiring material is copper.